10/716,041

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ENTRY 0.06 SESSION 0.27

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FULL ESTIMATED COST

0.21

0.48

FILE 'USPATFULL' ENTERED AT 14:05:36 ON 29 APR 2004 CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 14:05:36 ON 29 APR 2004
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=> s 11 and 12

L3 . 25 L1 AND L2

=> d 13 1-25 ibib abs

L3 ANSWER 1 OF 25 USPATFULL on STN

ACCESSION NUMBER:

2003:228386 USPATFULL

TITLE:

Catalyst composition and methods for its preparation

and use in a polymerization process

INVENTOR(S):

Wenzel, Timothy T., Charleston, WV, United States

PATENT ASSIGNEE(S): Univation Technologies, LLC, Houston, TX, United States

(U.S. corporation)

PATENT INFORMATION: APPLICATION INFO.:

US 6610803 B1 20030826 US 2000-711335 20001109

APPLICATION INFO.: US 2000-711335 20001109 (9)
RELATED APPLN. INFO.: Division of Ser. No. US 1998-215432, filed on 17 Dec

1998, now patented, Pat. No. US 6180735

DOCUMENT TYPE:

Utility

FILE SEGMENT:

GRANTED

PRIMARY EXAMINER:

Choi, Ling-Siu

LEGAL REPRESENTATIVE: Sher, Jaimes, Jones, Lisa Kimes, Faulkner, Kevin M.

NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS:

0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT:

1789

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carbonyl compound. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 2 OF 25 USPATFULL on STN L3

ACCESSION NUMBER: 2003:166751 USPATFULL

TITLE:

Polymerisation process

INVENTOR(S):

Samson, John Norman Reid, Stirling, UNITED KINGDOM

NUMBER	KIND	DATE	
US 2003114609	A1	20030619	
US 2002-257161	A1	20021009	(10)
WO 2001-GB1583		20010406	

NUMBER DATE ______ PRIORITY INFORMATION: GB 2000-8770 20000410

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION FILE SEGMENT:

PATENT INFORMATION: APPLICATION INFO .:

LEGAL REPRESENTATIVE: FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP,

1300 I STREET, NW, WASHINGTON, DC, 20005

NUMBER OF CLAIMS:

13

EXEMPLARY CLAIM:

1 1 Drawing Page(s)

NUMBER OF DRAWINGS:

LINE COUNT: 842

CAS INDEXING IS AVAILABLE FOR THIS PATENT. A process for transitioning between two catalysts is

disclosed, comprising the steps of a) discontinuing the feed of the first catalyst into the polymerization reactor, and then b) introducing the second catalyst into the reactor, wherein one of the catalysts comprises a late transition metal catalyst and the other is a catalyst which is incompatible therewith. It is preferred that the late transition metal catalyst is a 2,6-diacetyl pyridine iron catalyst.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 3 OF 25 USPATFULL on STN

ACCESSION NUMBER:

2003:109063 USPATFULL

TITLE:

Catalyst composition and methods for its preparation

and use in a polymerization process

INVENTOR(S):

Wenzel, Timothy T., Charleston, WV, United States

PATENT ASSIGNEE(S):

Univation Technologies, LLC, Houston, TX, United States

(U.S. corporation)

NUMBER KIND DATE ______ US 6551957 B1 20030422 PATENT INFORMATION:

APPLICATION INFO .:

US 2000-710829

20001109 (9)

RELATED APPLN. INFO.:

Division of Ser. No. US 1998-215432, filed on 17 Dec

1998, now patented, Pat. No. US 6180735

DOCUMENT TYPE:

FILE SEGMENT:

GRANTED

PRIMARY EXAMINER:

Wu, David W.

ASSISTANT EXAMINER:

Choi, Ling-Siu

LEGAL REPRESENTATIVE:

Sher, Jaimes, Faulkner, Kevin M.

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

1

NUMBER OF DRAWINGS:

0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT:

1746

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carbonyl compound. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 4 OF 25 USPATFULL on STN

ACCESSION NUMBER:

2002:228416 USPATFULL

TITLE:

Catalyst composition and methods for its preparation

and use in a polymerization process

INVENTOR (S):

Agapiou, Agapios Kyriacos, Humble, TX, UNITED STATES

Kuo, Chi-I, Humble, TX, UNITED STATES

Glowczwski, David Michael, Baytown, TX, UNITED STATES Ackerman, Steven Kent, Baytown, TX, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002123579	A1	20020905	
	US 6608153	B2	20030819	
APPLICATION INFO.:	US 2001-992758	A1	20011106	(9)

APPLICATION INFO.:

Αl RELATED APPLN. INFO.: Division of Ser. No. US 1998-113216, filed on 10 Jul

1998, ABANDONED

DOCUMENT TYPE: FILE SEGMENT:

Utility APPLICATION

LEGAL REPRESENTATIVE:

Univation Technologies, LLC, 5555 San Felipe, Suite

1950, Houston, TX, 77056

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

77

LINE COUNT:

2259

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 5 OF 25 USPATFULL on STN

ACCESSION NUMBER:

2002:214413 USPATFULL

TITLE:

Polymerization process

INVENTOR(S):

Muruganandam, Natarajan, Belle Mead, NJ, UNITED STATES

Yang, Xinmin, Franklin Park, NJ, UNITED STATES Karol, Frederick J., Lakewood, NJ, UNITED STATES

NUMBER KIND DATE _____ PATENT INFORMATION:

US 2002115804 A1 20020822 US 6538081 B2 20030325

US 6538081 B2 20030325 US 2000-739178 A1 20001218 (9) APPLICATION INFO.:

DOCUMENT TYPE: FILE SEGMENT: Utility APPLICATION

LEGAL REPRESENTATIVE: Univation Technologies, LLC, Suite 1950, 5555 San

Felipe, Houston, TX, 77056

NUMBER OF CLAIMS: EXEMPLARY CLAIM: LINE COUNT: 1139

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The invention provides a process for reducing the low molecular weight oligomer content of olefin polymers produced by metallocene catalysis wherein at least one organometallic compound is fed continuously into the reactor during polymerization. The organometallic compound has the formula R.sup.1.sub.nA, wherein A is a Periodic Table Group 12 or 13 element. R.sup.1 is the same or different, substituted or unsubstituted, straight or branched chain alkylradical, cyclic hydrocarbyl radical, alkyl-cyclohydrocarbyl radical, aromatic radical or alkoxide radical and n is 2 or 3, to form a polymer product having a content of said compound of at least about 50 weight ppm.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 6 OF 25 USPATFULL on STN

2002:192002 USPATFULL ACCESSION NUMBER:

Polymerization reactor operability using static charge TITLE:

modifier agents

Patrick, Brant, Seabrook, TX, UNITED STATES INVENTOR(S):

Muhle, Michael Elroy, Kingwood, TX, UNITED STATES

Kuchta, Matt, Houston, TX, UNITED STATES

NUMBER KIND DATE _____ US 2002103072 A1 20020801 US 2000-728267 A1 20001201 PATENT INFORMATION: APPLICATION INFO.: A1 20001201 (9)

DOCUMENT TYPE: Utility APPLICATION FILE SEGMENT:

LEGAL REPRESENTATIVE: Jaimes Sher, Univation Technologies LLC, Suite 1950, 5555 San Felipe, Houston, TX, 77056

29 NUMBER OF CLAIMS: EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 1 Drawing Page(s)

LINE COUNT: 1635

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a static charge modifier. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 7 OF 25 USPATFULL on STN

2002:48550 USPATFULL ACCESSION NUMBER:

Catalyst composition and methods for its preparation TITLE:

and use in a polymerization process

Agapiou, Agapios K., Humble, TX, UNITED STATES INVENTOR(S):

Kuo, Chi-I, Humble, TX, UNITED STATES

Glowczwski, David M., Baytown, TX, UNITED STATES

Ackerman, Steve K., Baytown, TX, UNITED STATES

RELATED APPLN. INFO.: Division of Ser. No. US 1999-397409, filed on 16 Sep 1999, GRANTED, Pat. No. US 6306984 Continuation-in-part

of Ser. No. US 1998-113216, filed on 10 Jul 1998,

PENDING

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: UNIVATION TECHNOLOGIES LLC, 5555 SAN FELIPE SUITE 1950,

HOUSTON, TX, 77056

NUMBER OF CLAIMS: 20 EXEMPLARY CLAIM: 1 LINE COUNT: 2224

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 8 OF 25 USPATFULL on STN

ACCESSION NUMBER:

2002:43651 USPATFULL

TITLE:

Catalyst composition and methods for its preparation and use in a polymerization and use in a polymerization $\[$

process

INVENTOR(S):

Agapiou, Agapios K., Humble, TX, UNITED STATES

Kuo, Chi-I, Humble, TX, UNITED STATES

Glowczwski, David M., Baytown, TX, UNITED STATES Ackerman, Steve K., Baytown, TX, UNITED STATES

RELATED APPLN. INFO.: Division of Ser. No. US 1999-397410, filed on 16 Sep

1999, GRANTED, Pat. No. US 6300436 Continuation-in-part

of Ser. No. US 1998-113216, filed on 10 Jul 1998,

PENDING
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Univation Technologies, LLC, Suite 1950, 5555 San

Felipe, Houston, TX, 77056

NUMBER OF CLAIMS: 20 EXEMPLARY CLAIM: 1 LINE COUNT: 2249

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 9 OF 25 USPATFULL on STN

2002:8448 USPATFULL ACCESSION NUMBER:

CATALYST COMPOSITION AND METHODS FOR ITS PREPARATION TITLE:

AND USE IN A POLYMERIZATION PROCESS

AGAPIOU, AGAPIOS KYRIACOS, HUMBLE, TX, UNITED STATES INVENTOR(S):

KUO, CHI-I, HUMBLE, TX, UNITED STATES

GLOWCZWSKI, DAVID MICHAEL, BAYTOWN, TX, UNITED STATES ACKERMAN, STEVEN KENT, BAYTOWN, TX, UNITED STATES

NUMBER KIND DATE -----

PATENT INFORMATION: US 2002004448 A1 20020110
APPLICATION INFO.: US 1998-113216 A1 19980710 (9)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: JAIME SHER, UNIVATION TECHNOLOGIES, 5555 SAN FELIPE, SUITE 1950, HOUSTON, TX, 77056

NUMBER OF CLAIMS: EXEMPLARY CLAIM

120 1

EXEMPLARY CLAIM: LINE COUNT:

2359

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 10 OF 25 USPATFULL on STN

ACCESSION NUMBER:

2001:185416 USPATFULL

TITLE:

Catalyst composition and methods for its preparation

and use in a polymerization process

INVENTOR(S):

Agapiou, Agapios K., Humble, TX, United States

Kuo, Chi-I, Humble, TX, United States

Glowczwski, David M., Baytown, TX, United States Ackerman, Steve K., Baytown, TX, United States

PATENT ASSIGNEE(S):

Univation Technologies, LLC, Houston, TX, United States

(U.S. corporation)

NUMBER KIND DATE ______

PATENT INFORMATION: US 6306984 B1 20011023 APPLICATION INFO.: US 1999-397409 19990916 (9)

APPLICATION INFO.:

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1998-113216, filed

on 10 Jul 1998

DOCUMENT TYPE:

Utility

FILE SEGMENT:

GRANTED

PRIMARY EXAMINER: Wu, David W. ASSISTANT EXAMINER: Lu, Caixia

LEGAL REPRESENTATIVE: Sher, Jaimes, Jones, Lisa Kimes

NUMBER OF CLAIMS:

40

EXEMPLARY CLAIM: LINE COUNT:

1 2312

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 11 OF 25 USPATFULL on STN

2001:173683 USPATFULL ACCESSION NUMBER:

Catalyst composition and methods for its preparation

TITLE:

and use in a polymerization process

Agapiou, Agapios K., Humble, TX, United States INVENTOR(S):

Kuo, Chi-I, Humble, TX, United States

Glowczwski, David M., Baytown, TX, United States Ackerman, Steve K., Baytown, TX, United States

Univation Technologies, LLC, Houston, TX, United States PATENT ASSIGNEE(S):

(U.S. corporation)

KIND DATE NUMBER ______ US 6300436 B1 20011009 US 1999-397410 19990916 (9)

PATENT INFORMATION: APPLICATION INFO.:

Continuation-in-part of Ser. No. US 1998-113216, filed RELATED APPLN. INFO.:

on 10 Jul 1998

Utility DOCUMENT TYPE: GRANTED FILE SEGMENT: PRIMARY EXAMINER: Wu, David W. ASSISTANT EXAMINER: Lu, Caixia

LEGAL REPRESENTATIVE: Sher, Jaimes, Jones, Lisa Kimes

NUMBER OF CLAIMS: EXEMPLARY CLAIM: 2327 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 12 OF 25 USPATFULL on STN

ACCESSION NUMBER: 2001:150623 USPATFULL

Catalyst delivery method, a catalyst feeder and their TITLE:

use in a polymerization process

Agapiou, Agapios K., Humble, TX, United States INVENTOR(S):

Russell, Kathryn A., Seabrook, TX, United States Exxon Chemical Patents, Inc. (U.S. corporation)

PATENT ASSIGNEE(S): NUMBER KIND DATE ______

US 2001020072 A1 20010906 US 2001-808615 A1 20010314 PATENT INFORMATION: (9) APPLICATION INFO.:

RELATED APPLN. INFO.: Division of Ser. No. US 1998-87024, filed on 29 May

1998, GRANTED, Pat. No. US 6245868

Utility DOCUMENT TYPE: APPLICATION FILE SEGMENT:

LEGAL REPRESENTATIVE: Univation Technologies, LLC, Suite 1950, 5555 San

Felipe, Houston, TX, 77056

NUMBER OF CLAIMS: 80 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 1 Drawing Page(s)

1779 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to an improved catalyst delivery method for introducing a supported bulky ligand metallocene-type catalyst system to a reactor for polymerizing one or more olefin(s). In particular, the invention provides for a method of introducing a

supported metallocene-type catalyst system into a polymerization reactor by and in the presence of a carrier solution of an antistatic agent and a liquid diluent. Also, the invention is directed toward a catalyst feeder for use in a polymerization process.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 13 OF 25 USPATFULL on STN

ACCESSION NUMBER:

2001:128508 USPATFULL

TITLE:

Catalyst delivery method, a catalyst feeder and their

use in a polymerization process

INVENTOR(S):

Agapiou, Agapios K., Humble, TX, United States Russell, Kathryn A., Seabrook, TX, United States

PATENT ASSIGNEE(S):

Exxon Chemical Patents, Inc. (U.S. corporation)

NUMBER KIND DATE -----

PATENT INFORMATION: US 2001012496 A1 20010809 APPLICATION INFO.: US 2001-808576 A1 20010314 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1998-87024, filed on 29 May

1998, GRANTED, Pat. No. US 6245868

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE:

Jaimes Sher, Univation Technologies L.L.C.., 5555 San

Felipe, Suite 1950, Houston, TX, 77056-2723

NUMBER OF CLAIMS:

EXEMPLARY CLAIM: NUMBER OF DRAWINGS:

1 Drawing Page(s)

LINE COUNT:

1779

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to an improved catalyst delivery method for introducing a supported bulky ligand metallocene-type catalyst system to a reactor for polymerizing one or more olefin(s). In particular, the invention provides for a method of introducing a supported metallocene-type catalyst system into a polymerization reactor by and in the presence of a carrier solution of an antistatic agent and a liquid diluent. Also, the invention is directed toward a catalyst feeder for use in a polymerization process.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 14 OF 25 USPATFULL on STN

ACCESSION NUMBER:

2001:112455 USPATFULL

TITLE:

Process and apparatus for fluid bed

polymerization

INVENTOR(S):

Joyce, William Helmer, Newton, CT, United States Union Carbide Chemicals & Plastics Technology Corporation, Danbury, CT, United States (U.S.

corporation)

NUMBER KIND DATE -----US 6262190 B1 20010717 US 1999-247414 19990210 (9)

PATENT INFORMATION:

PATENT ASSIGNEE(S):

DOCUMENT TYPE: FILE SEGMENT:

Utility GRANTED

PRIMARY EXAMINER: NUMBER OF CLAIMS:

Teskin, Fred

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS:

LINE COUNT:

7 Drawing Figure(s); 4 Drawing Page(s) 690

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

In gas phase fluid bed polymerization AB

processes, operation can be achieved over wider ranges of fluidizing gas

velocities without incurring undue energy costs by adjusting the pressure drop through the grid below the bed to provide a ratio of pressure drop through the grid to pressure drop through the grid and bed above about 0.15:1. The range of fluidizing gas velocities can enhance the practicality of operating the processes over varying bed heights while reducing the risk of forming deposits of polymer. The processes of the invention are particularly useful to accommodate start-ups, catalyst transitions and shutdowns.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 15 OF 25 USPATFULL on STN

ACCESSION NUMBER: 2001:86569 USPATFULL

TITLE: Catalyst delivery method, a catalyst feeder and their

use in a polymerization process

INVENTOR(S): Agapiou, Agapios K., Humble, TX, United States

Russell, Kathryn A., Seabrook, TX, United States
Univation Technologies Houston TX United States

PATENT ASSIGNEE(S): Univation Technologies, Houston, TX, United States

(U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6245868 B1 20010612

APPLICATION INFO.: US 1998-87024 19980529 (9)

DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Teskin, Fred

LEGAL REPRESENTATIVE: Sher, Jaimes, Jones, Lisa Kimes

NUMBER OF CLAIMS: 56

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 1 Drawing Figure(s); 1 Drawing Page(s)

LINE COUNT: 1644

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to an improved catalyst delivery method for introducing a supported bulky ligand metallocene-type catalyst system to a reactor for polymerizing one or more olefin(s). In particular, the invention provides for a method of introducing a supported metallocene-type catalyst system into a polymerization reactor by and in the presence of a carrier solution of an antistatic agent and a liquid diluent. Also, the invention is directed toward a catalyst feeder for use in a polymerization process.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 16 OF 25 USPATFULL on STN

ACCESSION NUMBER: 2001:14590 USPATFULL

TITLE: Catalyst composition and methods for its preparation

and use in a polymerization process

INVENTOR(S): Wenzel, Timothy T., Charleston, WV, United States

PATENT ASSIGNEE(S): Univation Technologies, Houston, TX, United States

(U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION: APPLICATION INFO.: DOCUMENT TYPE: FILE SEGMENT: PRIMARY EXAMINER: ASSISTANT EXAMINER: LEGAL REPRESENTATIVE: NUMBER OF CLAIMS:	US 6180735 US 1998-215432 Utility Granted Wu, David W. Choi, Ling-Siu Sher, Jaimes, Jor	B1 B1 nes, Li	20010130 19981217 sa Kimes	(9)
EXEMPLARY CLAIM:	1			

1753

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for ABmaking the catalyst composition of a polymerization catalyst and a carbonyl compound. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 17 OF 25 USPATFULL on STN L_3

ACCESSION NUMBER:

1998:55025 USPATFULL

TITLE:

Process for transitioning between

INVENTOR (S):

incompatible polymerization catalysts

Agapiou, Agapios Kyriacos, Humble, TX, United States Muhle, Michael Elroy, Kingwood, TX, United States Renola, Gary Thomas, Seabrook, TX, United States

PATENT ASSIGNEE(S):

Exxon Chemical Patents Inc., Wilmington, DE, United

States (U.S. corporation)

NUMBER KIND DATE -----

PATENT INFORMATION:

APPLICATION INFO.:

RELATED APPLN. INFO.:

US 5753786 19980519 US 1995-442590 19950517 (8) Division of Ser. No. US 1994-218277, filed on 25 Mar

1994, now patented, Pat. No. US 5442019

DOCUMENT TYPE:

Utility

FILE SEGMENT:

Granted

PRIMARY EXAMINER:

Weber, Thomas R.

LEGAL REPRESENTATIVE:

Sher, Jaimes, Wolfs, Denise Y.

NUMBER OF CLAIMS:

33

EXEMPLARY CLAIM:

1 4 Drawing Figure(s); 4 Drawing Page(s)

NUMBER OF DRAWINGS: LINE COUNT:

1141

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

This invention relates to a process for transitioning between

incompatible polymerization catalyst systems.

Particularly, the invention relates to a process for transitioning from an olefin polymerization reaction utilizing a traditional Ziegler-Natta catalyst system to a metallocene-olefin polymerization reaction.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 18 OF 25 USPATFULL on STN

ACCESSION NUMBER:

1998:48528 USPATFULL

TITLE:

Process for transitioning between

INVENTOR(S):

incompatible polymerization catalysts Agapiou, Agapios Kyriacos, Humble, TX, United States

Muhle, Michael Elroy, Kingwood, TX, United States Renola, Gary Thomas, Seabrook, TX, United States

PATENT ASSIGNEE(S):

Exxon Chemical Patents Inc., Houston, TX, United States

(U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION:

US 5747612 US 1995-444592 19980505

APPLICATION INFO.: RELATED APPLN. INFO.:

19950519 (8) Division of Ser. No. US 1994-218277, filed on 25 Mar

1994, now patented, Pat. No. US 5442019

DOCUMENT TYPE:

Utility

FILE SEGMENT:

Granted

PRIMARY EXAMINER:

Weber, Thomas R.

LEGAL REPRESENTATIVE: Sher, Jaimes, Wolfs, Denise Y.

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

19 1

NUMBER OF DRAWINGS: 4 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT: 1092

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

This invention relates to a process for transitioning between

incompatible polymerization catalyst systems.

Particularly, the invention relates to a process for transitioning from an olefin polymerization reaction

utilizing a traditional Ziegler-Natta catalyst system to a

metallocene-olefin polymerization reaction.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 19 OF 25 USPATFULL on STN

ACCESSION NUMBER: 97:89042 USPATFULL

TITLE:

Process for transitioning between

incompatible polymerization catalysts

INVENTOR(S):

Muhle, Michael Elroy, Kingwood, TX, United States Agapiou, Agapios Kyriacos, Humble, TX, United States Renola, Gary Thomas, Seabrook, TX, United States

PATENT ASSIGNEE(S):

Exxon Chemical Patents Inc., Houston, TX, United States

(U.S. corporation)

NUMBER KIND DATE _____

PATENT INFORMATION:
APPLICATION INFO.:
DOCUMENT TYPE:

US 5672666 19970930 US 1995-461799 19950605 (8)

DOCUMENT TYPE:

Utility

FILE SEGMENT: Granted
PRIMARY EXAMINER: Weber, Thomas R.
LEGAL REPRESENTATIVE: Sher, Jaimes, Wolfs, Denise Y.
NUMBER OF CLAIMS: 27

EXEMPLARY CLAIM:

LINE COUNT:

1077

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

This invention relates to a process for transitioning between

polymerization catalyst systems which are incompatible

with each other. Particularly, the invention relates to a process for

transitioning from an olefin polymerization reaction

utilizing a traditional Ziegler-Natta catalyst system to a

metallocene-olefin polymerization reaction.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 20 OF 25 USPATFULL on STN

ACCESSION NUMBER: 97:89041 USPATFULL

TITLE:

Process for transitioning between incompatible polymerization catalysts

INVENTOR(S):

Agapiou, Agapios Kyriacos, Humble, TX, United States Muhle, Michael Elroy, Kingwood, TX, United States Renola, Gary Thomas, Seabrook, TX, United States

PATENT ASSIGNEE(S):

Exxon Chemical Patents, Inc., Wilmington, DE, United

States (U.S. corporation)

NUMBER KIND DATE ______ PATENT INFORMATION: US 5672665 19970930
APPLICATION INFO.: US 1995-443136 19950517 (8)
RELATED APPLN. INFO.: Division of Ser. No. US 1994-218277, filed on 25 Mar

1994, now patented, Pat. No. US 5442019

Utility

DOCUMENT TYPE: FILE SEGMENT:

Granted

PRIMARY EXAMINER:

Schofer, Joseph L.

ASSISTANT EXAMINER:

Weber, Tom

LEGAL REPRESENTATIVE: Sher, Jaimes

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS:

1

4 Drawing Figure(s); 4 Drawing Page(s)

LINE COUNT:

1053

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AΒ

This invention relates to a process for transitioning between

incompatible polymerization catalyst systems.

Particularly, the invention relates to a process for transitioning from an olefin polymerization reaction

utilizing a traditional Ziegler-Natta catalyst system to a

metallocene-olefin polymerization reaction.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 21 OF 25 USPATFULL on STN 1.3

ACCESSION NUMBER:

95:73700 USPATFULL

TITLE:

Process for transitioning between incompatible polymerization catalysts

INVENTOR(S):

Agapiou, Agapios K., Humble, TX, United States Muhle, Michael E., Kingwood, TX, United States

Renola, Gary T., Seabrook, TX, United States

PATENT ASSIGNEE(S):

Exxon Chemical Company, Wilmington, DE, United States

(U.S. corporation)

NUMBER KIND DATE -----

PATENT INFORMATION: US 5442019
APPLICATION INFO.: US 1994-218277
DOCUMENT TYPE: Utility

19950815 19940325 (8)

DOCUMENT TYPE:

Utility

FILE SEGMENT:

Granted

PRIMARY EXAMINER: Schofer, Joseph L. ASSISTANT EXAMINER: Weber, Tom

LEGAL REPRESENTATIVE: Sher, Jaimes

NUMBER OF CLAIMS:

15

EXEMPLARY CLAIM: NUMBER OF DRAWINGS:

4 Drawing Figure(s); 4 Drawing Page(s)

LINE COUNT:

1084

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

This invention relates to a process for transitioning between

incompatible polymerization catalyst systems.

Particularly, the invention relates to a process for transitioning from an olefin polymerization reaction utilizing a traditional Ziegler-Natta catalyst system to a

metallocene-olefin polymerization reaction.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 22 OF 25 USPAT2 on STN

ACCESSION NUMBER:

2002:228416 USPAT2

Catalyst composition and methods for its preparation

and use in a polymerization process

INVENTOR (S):

Agapiou, Agapios Kyriacos, Humble, TX, United States

Kuo, Chi-I, Humble, TX, United States

Glowczwski, David Michael, Baytown, TX, United States Ackerman, Steven Kent, Baytown, TX, United States

PATENT ASSIGNEE(S):

Univation Technologies, LLC, Houston, TX, United States

(U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION:

US 6608153 B2 20030819

APPLICATION INFO.: US 2001-992758 20011106 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1998-113216, filed on 10 Jul

1998

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED PRIMARY EXAMINER: Lu, Caixia

LEGAL REPRESENTATIVE: Sher, Jaimes, Jones, Lisa Kimes, Faulkner, Kevin M.

NUMBER OF CLAIMS: 77 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT: 2227

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky liqund metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 23 OF 25 USPAT2 on STN

ACCESSION NUMBER: 2002:214413 USPAT2 TITLE: Polymerization process

INVENTOR(S): Muruganandam, Natarajan, 4 McIntire Dr., Belle Mead,

NJ, United States 08502

Yang, Xinmin, 14 Marco Polo Ct., Franklin Park, NJ,

United States 08823

Karol, Frederick J., 157 Skyline Dr., Lakewood, NJ,

United States 08701

NUMBER KIND DATE -----

PATENT INFORMATION: APPLICATION INFO.:

US 6538081 B2 20030325 US 2000-739178 20001218 20001218 (9)

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED ASSISTANT EXAMINER: Rabago P

LEGAL REPRESENTATIVE: McKinney, Osborn K.

NUMBER OF CLAIMS: EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT: 1100

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The invention provides a process for reducing the low molecular weight oligomer content of olefin polymers produced by metallocene catalysis wherein at least one organometallic compound is fed continuously into the reactor during polymerization. The organometallic compound has the formula R.sup.1.sub.nA, wherein A is a Periodic Table Group 12 or 13 element. R.sup.1 is the same or different, substituted or unsubstituted, straight or branched chain alkylradical, cyclic hydrocarbyl radical, alkyl-cyclohydrocarbyl radical, aromatic radical or alkoxide radical and n is 2 or 3, to form a polymer product having a content of said compound of at least about 50 weight ppm.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 24 OF 25 USPAT2 on STN

ACCESSION NUMBER: 2002:48550 USPAT2

TITLE:

Catalyst composition and methods for its preparation

and use in a polymerization process

INVENTOR(S):

Agapiou, Agapios K., Humble, TX, United States

Kuo, Chi-I, Humble, TX, United States

Glowczwski, David M., Baytown, TX, United States Ackerman, Steve K., Baytown, TX, United States

PATENT ASSIGNEE(S): Univation Technologies, LLC, Houston, TX, United States

(U.S. corporation)

APPLICATION INFO.: US 2001-934328 20010823 (9)
RELATED APPLN. INFO.: Division of Ser. No. US 1999-397409, filed on 16 Sep

RELATED APPLN. INFO.: Division of Ser. No. US 1999-397409, filed on 1999, now patented, Pat. No. US 6306984

Continuation-in-part of Ser. No. US 1998-113216, filed

on 10 Jul 1998

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Wu, David W.
ASSISTANT EXAMINER: Lu, Caixia

LEGAL REPRESENTATIVE: Sher, Jaimes, Jones, Lisa Kimes

NUMBER OF CLAIMS: 20 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT: 2185

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 25 OF 25 USPAT2 on STN

ACCESSION NUMBER: 2002:43651 USPAT2

TITLE: Catalyst composition and methods for its preparation

and use in a polymerization process

INVENTOR(S): Agapiou, Agapios K., Humble, TX, United States

Kuo, Chi-I, Humble, TX, United States

Glowczwski, David M., Baytown, TX, United States Ackerman, Steve K., Baytown, TX, United States

PATENT ASSIGNEE(S): Univation Technologies, LLC, Houston, TX, United States

(U.S. corporation)

RELATED APPLN. INFO.: Division of Ser. No. US 1999-397410, filed on 16 Sep

1999, now patented, Pat. No. US 6300436

Continuation-in-part of Ser. No. US 1998-113216, filed

on 10 Jul 1998

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Wu, David W.
ASSISTANT EXAMINER: Lu, Caixia

LEGAL REPRESENTATIVE: Sher, Jaimes, Jones, Lisa Kimes

NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT: 2211

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the

catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L3 ANSWER 2 OF 25 USPATFULL on STN

AB A process for transitioning between two catalysts is disclosed, comprising the steps of a) discontinuing the feed of the first catalyst into the polymerization reactor, and then b) introducing the second catalyst into the reactor, wherein one of the catalysts comprises a late transition metal catalyst and the other is a catalyst which is incompatible therewith. It is preferred that the late transition metal catalyst is a 2,6-diacetyl pyridine iron catalyst.

SUMM [0001] The present invention relates to a process for the polymerisation and copolymerisation of 1-olefins, and particularly to a process for transitioning between different polymerization catalyst systems.

SUMM [0005] EP-A-75 1965 discloses methods of transitioning between incompatible catalysts, involving the use of catalyst killers. It defines "incompatible" catalysts as those which satisfy one or more of the following criteria: 1) those catalysts that in each other's presence reduce the activity of at least one of the catalysts by greater than 50%; 2) those catalysts such that under the same reactive conditions one of the catalysts produces polymers having a molecular weight greater than two times higher than any other catalyst in the system; and 3) those catalysts that differ in comonomer incorporation or reactivity ratio under the same conditions by more than about 30%.

[0035] After introduction of the first catalyst has been discontinued, SUMM the polymerisation reactor may be partially or completely emptied. Completely emptying the reactor ensures that when the second catalyst is introduced, all the polymer subsequently produced is purely that derived from the second catalyst. However it is preferred at most only to partially empty the reactor, e.g. by reducing the bed height in the case of a gas phase fluidised bed reactor, as this is less disruptive of the polymerisation process. Although this results in the polymerisation with the second catalyst initially producing polymer which is mixed with polymer derived from the first catalyst, this is a relatively minor problem in the case of the present invention, because one of the catalysts is a late transition metal catalyst. Typically, between zero and half of the contents of the reactor by volume may be removed, though preferably only one third or less are removed. In the most preferred case, none of the contents of the reactor are removed prior to commencing the polymerisation with the second catalyst.

DETD [0093] Into a **fluidized bed reactor** heated at 30° C. and supplied with a fluidisation gas composed of nitrogen containing less than 2 vpm of water vapour and with a flow rate of 4.7 ml/s, were charged 15 kg of a granular chromium catalyst sold under the trade name EP30XA by Ineos Silicas (Warrington, England). The characteristics of this catalyst are: surface area=320 m.sup.2/g, pore volume=1.7 ml/g and chromium content=0.25% by weight. Next the reactor was heated from 60° C. to 150° C. at a rate of 100° C./h. The catalyst was then maintained at 150° C. for 30 minutes in the fluidised state. Next 12.5 moles of a mixture of isopropyl titanate and n-butyl titanate sold under the trade name "Tilcom BIP" by Titanium Intermediates Limited (Billingham, England) were introduced

into the reactor. The reactor was then maintained at 150° C. for 2 hours. The reactor was then heated from 150° C. to 300° C. at a rate of 100° C./h.

DETD [0095] A fluidised bed reactor 74 cm in

diameter was used for the polymerisations. This contained a fluidized bed and was operated at 90° C. using Catalyst 3. The gas phase was composed of hydrogen, nitrogen, ethylene and hexane fluidised at 42 cm/sec. The partial pressures of the components of the gas mixture are given in Condition 1 of Table 2 below.

=> d his

(FILE 'HOME' ENTERED AT 14:04:58 ON 29 APR 2004)

FILE 'STNGUIDE' ENTERED AT 14:05:07 ON 29 APR 2004

FILE 'HOME' ENTERED AT 14:05:11 ON 29 APR 2004

SET ABBR ON PERM SET PLURALS ON PERM

FILE 'USPATFULL, USPAT2, CAPLUS, JAPIO' ENTERED AT 14:05:36 ON 29 APR 2004

L1 17457 S FLUID? BED (1W) (REACTOR OR POLYMERIZ?)

L2 34 S TRANSITIONING (3A) (CATALYST OR CATALYTIC OR POLYMERIZATION)

L3 25 S L1 AND L2

=> s (transitioning or chang? or vary?) (3w) polymer?

L4 15497 (TRANSITIONING OR CHANG? OR VARY?) (3W) POLYMER?

=> s l1 and l4

L5 191 L1 AND L4

=> s transitioning (3w) polymer?

L6 44 TRANSITIONING (3W) POLYMER?

=> s 11 and 16

L7 22 L1 AND L6

=> d 17 1-22 ibib abs

L7 ANSWER 1 OF 22 USPATFULL on STN

ACCESSION NUMBER: 2003:228386 USPATFULL

TITLE: Catalyst composition and methods for its preparation

and use in a polymerization process

INVENTOR(S): Wenzel, Timothy T., Charleston, WV, United States

PATENT ASSIGNEE(S): Univation Technologies, LLC, Houston, TX, United States

(U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6610803 B1 20030826 APPLICATION INFO.: US 2000-711335 20001109 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1998-215432, filed on 17 Dec

1998, now patented, Pat. No. US 6180735

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Choi, Ling-Siu

LEGAL REPRESENTATIVE: Sher, Jaimes, Jones, Lisa Kimes, Faulkner, Kevin M.

NUMBER OF CLAIMS: 20 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT: 1789

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a catalyst composition and a method for

making the catalyst composition of a polymerization catalyst and a carbonyl compound. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 2 OF 22 USPATFULL on STN L7

ACCESSION NUMBER: 2003:166751 USPATFULL Polymerisation process TITLE:

Samson, John Norman Reid, Stirling, UNITED KINGDOM INVENTOR(S):

NUMBER KIND DATE ______ PATENT INFORMATION: US 2003114609 A1 20030619 APPLICATION INFO.: US 2002-257161 A1 20021009 (10) WO 2001-GB1583 20010406

> NUMBER DATE ______ GB 2000-8770 20000410

PRIORITY INFORMATION: DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP,

1300 I STREET, NW, WASHINGTON, DC, 20005

NUMBER OF CLAIMS: EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 1 Drawing Page(s) LINE COUNT: 842

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A process for transitioning between two catalysts is disclosed, comprising the steps of a) discontinuing the feed of the first catalyst into the polymerization reactor, and then b) introducing the second catalyst into the reactor, wherein one of the catalysts comprises a late transition metal catalyst and the other is a catalyst which is incompatible therewith. It is preferred that the late transition metal catalyst is a 2,6-diacetyl pyridine iron catalyst.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 3 OF 22 USPATFULL on STN

ACCESSION NUMBER: 2003:109063 USPATFULL

Catalyst composition and methods for its preparation TITLE:

and use in a polymerization process

Wenzel, Timothy T., Charleston, WV, United States INVENTOR(S):

Univation Technologies, LLC, Houston, TX, United States PATENT ASSIGNEE(S):

(U.S. corporation)

NUMBER KIND DATE ______ PATENT INFORMATION: US 6551957 B1 20030422 APPLICATION INFO.: US 2000-710829 20001109 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1998-215432, filed on 17 Dec

1998, now patented, Pat. No. US 6180735

Utility DOCUMENT TYPE: GRANTED FILE SEGMENT: PRIMARY EXAMINER: Wu, David W.
ASSISTANT EXAMINER: Choi, Ling-Siu

LEGAL REPRESENTATIVE: Sher, Jaimes, Faulkner, Kevin M.

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT: 1746

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for AΒ making the catalyst composition of a polymerization catalyst and a carbonyl compound. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 4 OF 22 USPATFULL on STN

ACCESSION NUMBER: 2002:228416 USPATFULL

TITLE: Catalyst composition and methods for its preparation

and use in a polymerization process

Agapiou, Agapios Kyriacos, Humble, TX, UNITED STATES INVENTOR(S):

Kuo, Chi-I, Humble, TX, UNITED STATES

Glowczwski, David Michael, Baytown, TX, UNITED STATES Ackerman, Steven Kent, Baytown, TX, UNITED STATES

NUMBER KIND DATE US 2002123579 A1 20020905 PATENT INFORMATION: US 6608153 B2 20030819 APPLICATION INFO.: US 2001-992758 A1 20011106 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1998-113216, filed on 10 Jul

1998, ABANDONED

DOCUMENT TYPE: Utility APPLICATION FILE SEGMENT:

LEGAL REPRESENTATIVE: Univation Technologies, LLC, 5555 San Felipe, Suite

1950, Houston, TX, 77056

77 NUMBER OF CLAIMS: EXEMPLARY CLAIM: 1 2259 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 5 OF 22 USPATFULL on STN

ACCESSION NUMBER: 2002:192002 USPATFULL

Polymerization reactor operability using static charge TITLE:

modifier agents

Patrick, Brant, Seabrook, TX, UNITED STATES INVENTOR(S):

Muhle, Michael Elroy, Kingwood, TX, UNITED STATES

Kuchta, Matt, Houston, TX, UNITED STATES

NUMBER KIND DATE PATENT INFORMATION: US 2002103072 A1 20020801
APPLICATION INFO.: US 2000-728267 A1 20001201 (9)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Jaimes Sher, Univation Technologies LLC, Suite 1950,

5555 San Felipe, Houston, TX, 77056

NUMBER OF CLAIMS: 29 1 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 1 Drawing Page(s)

LINE COUNT: 1635

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for AB making the catalyst composition of a polymerization catalyst and a static charge modifier. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 6 OF 22 USPATFULL on STN

ACCESSION NUMBER: 2002:109144 USPATFULL

Transition strategy for the production of sticky TITLE:

polymers

Zilker, Jr., Daniel Paul, Charleston, WV, United States INVENTOR(S):

Vacek, William David, Victoria, TX, United States O'Rosky, Mark Edwin, Victoria, TX, United States Hussein, Fathi David, Cross Lanes, WV, United States

Union Carbide Chemicals & Plastics Technology PATENT ASSIGNEE(S):

Corporation, Danbury, CT, United States (U.S.

corporation)

NUMBER KIND DATE _____ US 6388027 B1 20020514 PATENT INFORMATION: APPLICATION INFO.: US 2000-694868 20001024 (9)

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED Teskin, Fred PRIMARY EXAMINER:

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

0 Drawing Figure(s); 0 Drawing Page(s) NUMBER OF DRAWINGS:

LINE COUNT: 610

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The invention relates to a process for transitioning from

polymerizing sticky polymer to polymerize another

sticky polymer in gas phase fluidization bed production to decrease transition time, reduce off-grade material, and/or prevent operational difficulty.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 7 OF 22 USPATFULL on STN

2002:48550 USPATFULL ACCESSION NUMBER:

Catalyst composition and methods for its preparation TITLE:

and use in a polymerization process

Agapiou, Agapios K., Humble, TX, UNITED STATES INVENTOR(S):

Kuo, Chi-I, Humble, TX, UNITED STATES

Glowczwski, David M., Baytown, TX, UNITED STATES Ackerman, Steve K., Baytown, TX, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002028742 US 6391819		20020307	
APPLICATION INFO.:	US 2001-934328	A1	20010823	(9)

RELATED APPLN. INFO.: Division of Ser. No. US 1999-397409, filed on 16 Sep 1999, GRANTED, Pat. No. US 6306984 Continuation-in-part

of Ser. No. US 1998-113216, filed on 10 Jul 1998,

PENDING

DOCUMENT TYPE: Utility FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE:

UNIVATION TECHNOLOGIES LLC, 5555 SAN FELIPE SUITE 1950,

HOUSTON, TX, 77056

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

1

LINE COUNT: 2224

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular,

the polymerization catalyst system is supported on a carrier.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 8 OF 22 USPATFULL on STN

ACCESSION NUMBER:

2002:43651 USPATFULL

TITLE:

Catalyst composition and methods for its preparation and use in a polymerization and use in a polymerization

INVENTOR (S):

Agapiou, Agapios K., Humble, TX, UNITED STATES

Kuo, Chi-I, Humble, TX, UNITED STATES

Glowczwski, David M., Baytown, TX, UNITED STATES Ackerman, Steve K., Baytown, TX, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002026018	A1	20020228
	US 6472342	B2	20021029
APPLICATION INFO :	US 2001-932912	A1	20010820

RELATED APPLN. INFO.:

Division of Ser. No. US 1999-397410, filed on 16 Sep

1999, GRANTED, Pat. No. US 6300436 Continuation-in-part of Ser. No. US 1998-113216, filed on 10 Jul 1998,

PENDING

DOCUMENT TYPE: FILE SEGMENT:

Utility APPLICATION

LEGAL REPRESENTATIVE:

Univation Technologies, LLC, Suite 1950, 5555 San

Felipe, Houston, TX, 77056

NUMBER OF CLAIMS: 20 EXEMPLARY CLAIM:

LINE COUNT:

2249

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 9 OF 22 USPATFULL on STN

ACCESSION NUMBER:

2002:8448 USPATFULL

TITLE:

CATALYST COMPOSITION AND METHODS FOR ITS PREPARATION

AND USE IN A POLYMERIZATION PROCESS

INVENTOR (S):

AGAPIOU, AGAPIOS KYRIACOS, HUMBLE, TX, UNITED STATES

KUO, CHI-I, HUMBLE, TX, UNITED STATES

GLOWCZWSKI, DAVID MICHAEL, BAYTOWN, TX, UNITED STATES ACKERMAN, STEVEN KENT, BAYTOWN, TX, UNITED STATES

			NUMBER		DATE
				- -	
PATENT	INFORMATION:	US	2002004448	A1	20020110

APPLICATION INFO.: US 1998-113216 A1 19980710 (9)

DOCUMENT TYPE: Utility APPLICATION FILE SEGMENT:

LEGAL REPRESENTATIVE: JAIME SHER, UNIVATION TECHNOLOGIES, 5555 SAN FELIPE,

SUITE 1950, HOUSTON, TX, 77056

NUMBER OF CLAIMS: 120 EXEMPLARY CLAIM: 1 LINE COUNT: 2359

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky liqund metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 10 OF 22 USPATFULL on STN

ACCESSION NUMBER: 2001:185416 USPATFULL

Catalyst composition and methods for its preparation TITLE:

and use in a polymerization process

Agapiou, Agapios K., Humble, TX, United States INVENTOR(S):

Kuo, Chi-I, Humble, TX, United States

Glowczwski, David M., Baytown, TX, United States Ackerman, Steve K., Baytown, TX, United States

Univation Technologies, LLC, Houston, TX, United States PATENT ASSIGNEE(S):

(U.S. corporation)

NUMBER KIND DATE -----

PATENT INFORMATION: US 6306984 B1 20011023 US 1999-397409 19990916 (9) APPLICATION INFO.:

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1998-113216, filed

on 10 Jul 1998

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED PRIMARY EXAMINER: Wu, David W. Lu, Caixia ASSISTANT EXAMINER:

LEGAL REPRESENTATIVE: Sher, Jaimes, Jones, Lisa Kimes

NUMBER OF CLAIMS: 40 EXEMPLARY CLAIM: 1 LINE COUNT: 2312

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 11 OF 22 USPATFULL on STN

2001:173683 USPATFULL ACCESSION NUMBER:

Catalyst composition and methods for its preparation TITLE:

and use in a polymerization process

Agapiou, Agapios K., Humble, TX, United States INVENTOR (S):

Kuo, Chi-I, Humble, TX, United States

Glowczwski, David M., Baytown, TX, United States Ackerman, Steve K., Baytown, TX, United States

Univation Technologies, LLC, Houston, TX, United States PATENT ASSIGNEE(S):

(U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: APPLICATION INFO.:

US 6300436

US 6300436 B1 20011009 US 1999-397410 19990916 (9)

RELATED APPLN. INFO.:

Continuation-in-part of Ser. No. US 1998-113216, filed

on 10 Jul 1998

DOCUMENT TYPE: FILE SEGMENT:

Utility GRANTED

PRIMARY EXAMINER: Wu, David W. ASSISTANT EXAMINER: Lu, Caixia

LEGAL REPRESENTATIVE: Sher, Jaimes, Jones, Lisa Kimes

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

1

2327

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 12 OF 22 USPATFULL on STN

ACCESSION NUMBER:

2001:14590 USPATFULL

TITLE:

Catalyst composition and methods for its preparation

and use in a polymerization process

INVENTOR(S):

Wenzel, Timothy T., Charleston, WV, United States Univation Technologies, Houston, TX, United States

(U.S. corporation)

NUMBER KIND DATE _____________

PATENT INFORMATION: APPLICATION INFO.:

PATENT ASSIGNEE(S):

US 6180735 B1 20010130 US 1998-215432 19981217 (9) Utility

DOCUMENT TYPE: FILE SEGMENT: PRIMARY EXAMINER: Wu, David W. ASSISTANT EXAMINER: Choi, Ling-Siu

Granted

LEGAL REPRESENTATIVE: Sher, Jaimes, Jones, Lisa Kimes

NUMBER OF CLAIMS: 11 EXEMPLARY CLAIM:

1 1753

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carbonyl compound. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 13 OF 22 USPATFULL on STN

ACCESSION NUMBER:

1998:55025 USPATFULL

TITLE:

Process for transitioning between

INVENTOR(S):

incompatible polymerization catalysts Agapiou, Agapios Kyriacos, Humble, TX, United States

Muhle, Michael Elroy, Kingwood, TX, United States Renola, Gary Thomas, Seabrook, TX, United States

PATENT ASSIGNEE(S):

Exxon Chemical Patents Inc., Wilmington, DE, United

States (U.S. corporation)

NUMBER KIND DATE _____ -----US 5753786 19980519 US 1995-442590 19950517 (8) PATENT INFORMATION: APPLICATION INFO.: RELATED APPLN. INFO.: Division of Ser. No. US 1994-218277, filed on 25 Mar 1994, now patented, Pat. No. US 5442019 DOCUMENT TYPE: Utility FILE SEGMENT: Granted PRIMARY EXAMINER: Weber, Thomas R.
LEGAL REPRESENTATIVE: Sher, Jaimes, Wolfs, Denise Y. NUMBER OF CLAIMS: 33 1 EXEMPLARY CLAIM: NUMBER OF DRAWINGS: 4 Drawing Figure(s); 4 Drawing Page(s) LINE COUNT: 1141 CAS INDEXING IS AVAILABLE FOR THIS PATENT. This invention relates to a process for transitioning between incompatible polymerization catalyst systems. Particularly, the invention relates to a process for transitioning from an olefin polymerization reaction utilizing a traditional

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 14 OF 22 USPATFULL on STN

reaction.

ACCESSION NUMBER: 1998:48528 USPATFULL

TITLE: Process for transitioning between

incompatible polymerization catalysts

INVENTOR(S): Agapiou, Agapios Kyriacos, Humble, TX, United States

Muhle, Michael Elroy, Kingwood, TX, United States Renola, Gary Thomas, Seabrook, TX, United States

Exxon Chemical Patents Inc., Houston, TX, United States PATENT ASSIGNEE(S):

Ziegler-Natta catalyst system to a metallocene-olefin polymerization

(U.S. corporation)

NUMBER KIND DATE PATENT INFORMATION: US 5747612 19980505 US 1995-444592 19950519

APPLICATION INFO.: (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1994-218277, filed on 25 Mar

1994, now patented, Pat. No. US 5442019

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Weber, Thomas R.

LEGAL REPRESENTATIVE: Sher, Jaimes, Wolfs, Denise Y.

NUMBER OF CLAIMS: 19 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 4 Drawing Figure(s); 4 Drawing Page(s)

LINE COUNT: 1092

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to a process for transitioning between incompatible polymerization catalyst systems. Particularly, the invention relates to a process for transitioning from an olefin polymerization reaction utilizing a traditional

Ziegler-Natta catalyst system to a metallocene-olefin polymerization

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 15 OF 22 USPATFULL on STN

ACCESSION NUMBER: 97:89042 USPATFULL

Process for transitioning between TITLE:

incompatible polymerization catalysts

Muhle, Michael Elroy, Kingwood, TX, United States INVENTOR(S):

Agapiou, Agapios Kyriacos, Humble, TX, United States

Renola, Gary Thomas, Seabrook, TX, United States

PATENT ASSIGNEE(S): Exxon Chemical Patents Inc., Houston, TX, United States

(U.S. corporation)

NUMBER KIND DATE ______

PATENT INFORMATION:
APPLICATION INFO.:

US 5672666 19970930 US 1995-461799 19950605 (8)

DOCUMENT TYPE:

Utility

NUMBER OF CLAIMS: 27

FILE SEGMENT: Granted
PRIMARY EXAMINER: Weber, Thomas R.
LEGAL REPRESENTATIVE: Sher, Jaimes, Wolfs, Denise Y.

EXEMPLARY CLAIM: 1

1077

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

This invention relates to a process for transitioning between polymerization catalyst systems which are incompatible with each

other. Particularly, the invention relates to a process for

transitioning from an olefin polymerization reaction

utilizing a traditional Ziegler-Natta catalyst system to a

metallocene-olefin polymerization reaction.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 16 OF 22 USPATFULL on STN

ACCESSION NUMBER:

97:89041 USPATFULL

TITLE:

Process for transitioning between incompatible polymerization catalysts

INVENTOR(S):

Agapiou, Agapios Kyriacos, Humble, TX, United States Muhle, Michael Elroy, Kingwood, TX, United States

Renola, Gary Thomas, Seabrook, TX, United States

PATENT ASSIGNEE(S):

Exxon Chemical Patents, Inc., Wilmington, DE, United

States (U.S. corporation)

NUMBER KIND DATE _______

PATENT INFORMATION: APPLICATION INFO.:

US 1995-443136 19950517 19950517 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1994-218277, filed on 25 Mar

1994, now patented, Pat. No. US 5442019

DOCUMENT TYPE:

Utility

FILE SEGMENT: Granted
PRIMARY EXAMINER: Schofer, Joseph L.
ASSISTANT EXAMINER: Weber, Tom LEGAL REPRESENTATIVE: Sher, Jaimes

NUMBER OF CLAIMS: 6

EXEMPLARY CLAIM:

1

NUMBER OF DRAWINGS: 4 Drawing Figure(s); 4 Drawing Page(s)

LINE COUNT:

1053

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

This invention relates to a process for transitioning between incompatible polymerization catalyst systems. Particularly, the invention relates to a process for transitioning from an olefin polymerization reaction utilizing a traditional

Ziegler-Natta catalyst system to a metallocene-olefin polymerization

reaction.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 17 OF 22 USPATFULL on STN

ACCESSION NUMBER: 95:73700 USPATFULL

Process for transitioning between TITLE:

incompatible polymerization catalysts

Agapiou, Agapios K., Humble, TX, United States INVENTOR(S):

Muhle, Michael E., Kingwood, TX, United States

Renola, Gary T., Seabrook, TX, United States

Exxon Chemical Company, Wilmington, DE, United States PATENT ASSIGNEE(S):

(U.S. corporation)

NUMBER KIND DATE ______

PATENT INFORMATION:
APPLICATION INFO.: US 5442019 19950815 US 1994-218277 19940325 (8)

DOCUMENT TYPE: Utility

FILE SEGMENT: Granted
PRIMARY EXAMINER: Schofer, Joseph L.
ASSISTANT EXAMINER: Weber, Tom LEGAL REPRESENTATIVE: Sher, Jaimes

NUMBER OF CLAIMS: 15 1 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 4 Drawing Figure(s); 4 Drawing Page(s)

1084 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

This invention relates to a process for transitioning between incompatible polymerization catalyst systems. Particularly, the invention relates to a process for transitioning from an olefin polymerization reaction utilizing a traditional

Ziegler-Natta catalyst system to a metallocene-olefin polymerization reaction.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 18 OF 22 USPAT2 on STN

2002:228416 USPAT2 ACCESSION NUMBER:

Catalyst composition and methods for its preparation TITLE:

and use in a polymerization process

Agapiou, Agapios Kyriacos, Humble, TX, United States INVENTOR(S):

Kuo, Chi-I, Humble, TX, United States

Glowczwski, David Michael, Baytown, TX, United States Ackerman, Steven Kent, Baytown, TX, United States

Univation Technologies, LLC, Houston, TX, United States PATENT ASSIGNEE(S):

(U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6608153 B2 20030819 APPLICATION INFO.: US 2001-992758 20011106 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1998-113216, filed on 10 Jul

1998

DOCUMENT TYPE: Utility GRANTED FILE SEGMENT: PRIMARY EXAMINER: Lu, Caixia

LEGAL REPRESENTATIVE: Sher, Jaimes, Jones, Lisa Kimes, Faulkner, Kevin M.

NUMBER OF CLAIMS: 77 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

2227 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for AΒ making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky liqand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 19 OF 22 USPAT2 on STN

2002:48550 USPAT2 ACCESSION NUMBER:

Catalyst composition and methods for its preparation TITLE:

and use in a polymerization process

INVENTOR(S): Agapiou, Agapios K., Humble, TX, United States

Kuo, Chi-I, Humble, TX, United States

Glowczwski, David M., Baytown, TX, United States Ackerman, Steve K., Baytown, TX, United States

Univation Technologies, LLC, Houston, TX, United States PATENT ASSIGNEE(S):

(U.S. corporation)

NUMBER KIND DATE ______

US 6391819 B2 20020521 US 2001-934328 20010823 PATENT INFORMATION:
APPLICATION INFO.: 20010823 (9)

Division of Ser. No. US 1999-397409, filed on 16 Sep RELATED APPLN. INFO.:

1999, now patented, Pat. No. US 6306984

Continuation-in-part of Ser. No. US 1998-113216, filed

on 10 Jul 1998

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED PRIMARY EXAMINER: Wu, David W. Lu, Caixia ASSISTANT EXAMINER:

Sher, Jaimes, Jones, Lisa Kimes LEGAL REPRESENTATIVE:

NUMBER OF CLAIMS: EXEMPLARY CLAIM: 1

0 Drawing Figure(s); 0 Drawing Page(s) NUMBER OF DRAWINGS:

LINE COUNT: 2185

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 20 OF 22 USPAT2 on STN

2002:43651 USPAT2 ACCESSION NUMBER:

Catalyst composition and methods for its preparation TITLE:

and use in a polymerization process

Agapiou, Agapios K., Humble, TX, United States INVENTOR(S):

Kuo, Chi-I, Humble, TX, United States

Glowczwski, David M., Baytown, TX, United States

Ackerman, Steve K., Baytown, TX, United States Univation Technologies, LLC, Houston, TX, United States PATENT ASSIGNEE(S):

(U.S. corporation)

NUMBER KIND DATE -----US 6472342 B2 20021029 PATENT INFORMATION: US 2001-932912 20010820 (9) APPLICATION INFO.:

Division of Ser. No. US 1999-397410, filed on 16 Sep RELATED APPLN. INFO.:

1999, now patented, Pat. No. US 6300436

Continuation-in-part of Ser. No. US 1998-113216, filed

on 10 Jul 1998

DOCUMENT TYPE: Utility GRANTED FILE SEGMENT: Wu, David W. PRIMARY EXAMINER: Lu, Caixia ASSISTANT EXAMINER:

Sher, Jaimes, Jones, Lisa Kimes LEGAL REPRESENTATIVE:

NUMBER OF CLAIMS: 20 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

2211 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a catalyst composition and a method for AΒ making the catalyst composition of a polymerization catalyst and a carboxylate metal salt. The invention is also directed to the use of the catalyst composition in the polymerization of olefin(s). In particular, the polymerization catalyst system is supported on a carrier. More particularly, the polymerization catalyst comprises a bulky ligand metallocene-type catalyst system.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 21 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:367299 CAPLUS

136:370929 DOCUMENT NUMBER:

Transition strategy for the production of sticky TITLE:

polymers or elastomers

Zilker, Daniel Paul, Jr.; Vacek, William David; INVENTOR (S):

O'rosky, Mark Edwin; Hussein, Fathi David

Union Carbide Chemicals & Plastics Technology PATENT ASSIGNEE(S):

Corporation, USA

SOURCE: U.S., 7 pp.

CODEN: USXXAM

DOCUMENT TYPE:

LANGUAGE:

Patent English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

APPLICATION NO. DATE KIND DATE PATENT NO. _____ B1 20020514 US 2000-05-US 2000-694868 -----US 2000-694868 20001024 US 6388027 PRIORITY APPLN. INFO.: 20001024

The invention relates to a process for transitioning from polymerizing sticky polymer to polymerize another sticky polymer in gas phase fluidization bed production to decrease transition time, reduce off-grade material, and/or prevent operational difficulty. The process comprises steps of: (a) terminating the feed of catalyst to a reactor, thereby allowing reaction rate to decrease; (b) terminating the polymerization using a reversible catalyst kill agent; (c) passivating the polymer with a gel inhibitor; (d) stopping polymer transfer from the reactor to the post-reaction purging and polishing equipment, thereby recovering aim-grade product from the post reaction equipment; (e) flow and pressure purging to remove kill agent; (f) feeding cocatalyst and optional promoters to establish concns. of these components; (g) establishing reaction conditions for the second sticky polymer; (h) re-initiating catalyst feed; and (i) re-initiating fluidization aid, cocatalyst, optional promoter and diene feeds.

REFERENCE COUNT: THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS 12 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 22 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:356263 CAPLUS

DOCUMENT NUMBER: 134:368136

Transition strategy for the production of sticky TITLE:

polymers or elastomers

Zilker, Daniel Paul, Jr.; Vacek, William David; INVENTOR(S):

O'rosky, Mark Edwin; Hussein, Fathi David

PATENT ASSIGNEE(S): Union Carbide Chemicals & Plastics Technology Corp.,

USA

SOURCE: Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DOCUMENT TYPE:

Patent English

LANGUAGE:

- -

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1099715	A1	20010516	EP 2000-309885	20001107
R: AT, BE,	CH, DE	, DK, ES, FI	R, GB, GR, IT, LI, LU,	NL, SE, MC, PT,
IE, SI,	LT, LV	, FI, RO		
BR 2000005275	A	20010703	BR 2000-5275	20001108
JP 2001139613	A2	20010522	JP 2000-343573	20001110
CN 1296019	A	20010523	CN 2000-132371	20001110
PRIORITY APPLN. INFO	.:		US 1999-165045P P	19991112

AB The invention relates to a process for transitioning from polymerizing sticky polymer to polymerize another sticky polymer in gas phase fluidization bed production to decrease transition time, reduce off-grade material, and/or prevent operational difficulty. The process comprises steps of: (a) terminating the feed of catalyst to a reactor, thereby allowing reaction rate to decrease; (b) terminating the polymerization using a reversible catalyst kill agent; (c) passivating the polymer with a gel inhibitor; (d) stopping polymer transfer from the reactor to the post-reaction purging and polishing equipment, thereby recovering aim-grade product from the post reaction equipment; (e) flow and pressure purging to remove kill agent; (f) feeding cocatalyst and

establishing reaction conditions for the second sticky polymer; (h) re-initiating catalyst feed; and (i) re-initiating fluidization aid, cocatalyst, optional promoter and diene feeds.

optional promoters to establish concns. of these components; (q)

REFERENCE COUNT:

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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